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THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named  
Inventor : Michael Seltzer et al.

Appln. No. : 10/647,586

Filed : August 25, 2003

For : METHOD AND APPARATUS USING  
HARMONIC-MODEL-BASED FRONT  
END FOR ROBUST SPEECH  
RECOGNITION

Docket No.: M61.12-0550

Group Art Unit: 2641

Examiner:

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I HEREBY CERTIFY THAT THIS PAPER IS BEING  
SENT BY U.S. MAIL, FIRST CLASS, TO THE  
COMMISSIONER FOR PATENTS, P.O. BOX 1450,  
ALEXANDRIA, VA 22313-1450, THIS

26<sup>th</sup> DAY OF January, 2005  
*[Signature]*  
PATENT ATTORNEY

Sir:

The patents or publications listed on the enclosed PTO Form-1449 are submitted pursuant to 37 C.F.R. § 1.97. Copies of the patents or publications cited are enclosed, except as waived by the Official Gazette notice of August 5, 2003 regarding copies of U.S. Patents and Published Applications.

TIME OF FILING

The information disclosure statement is being filed:

1. X with the application or within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last. In accordance with 37 C.F.R. § 1.97(b), no statement or fee is required.
2. \_\_\_\_\_ after the time period specified in paragraph 1 above, but before the mailing date of a final action under 37 C.F.R. § 1.113 or notice of allowance under 37 C.F.R. § 1.311. Therefore, in accordance with 37 C.F.R. § 1.97(c), submitted herewith is:

(check either A or B below)

- A. ☐ a statement as specified in 37 C.F.R. § 1.97(e).
- B. ☐ the fee set forth in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c).

3. ☐ after the mailing date of either a final action under 37 C.F.R. § 1.113 or a notice of allowance under 37 C.F.R. § 1.311, whichever occurs first, but before payment of the issue fee. Therefore, Applicant petitions for consideration and submits herewith:
- A. a statement as specified in 37 C.F.R. § 1.97(e);
  - B. the petition fee set forth in 37 C.F.R. § 1.17(p).

**STATEMENT**

(only used if No. 2(A) or No. 3 above is checked)

The person(s) signing below certify

(check appropriate paragraph)

☐ that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. § 1.97(e)(1).

OR

☐ that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. § 1.97(e)(2).

**METHOD OF PAYMENT**

  X   No fee is required.

       Attached is a check in the amount of \$       .

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123. A duplicate copy of this communication is enclosed.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

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FORM PTO-1449	Atty. Docket No.: M61.12-0550	Appl. No.: 10/647,586
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	First Named Inventor:	
	Michael Seltzer et al.	
	Filing Date	Group Art:
	August 25, 2003	2641

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AL	Gu, L., et al., "Perceptual Harmonic Cepstral Coefficients for Speech Recognition in Noisy Environment," Proceedings of ICASSP, Salt Lake City, Utah, May 2001.
AM	Ealey, D., et al., "Harmonic Tunnelling: Tracking Non-Stationary Noises During Speech," Proceedings of Eurospeech, Aalborg, Denmark, September 2001.
AN	Yegnanarayana, B., et al., "An Iterative Algorithm for Decomposition of Speech Signals into Periodic and Aperiodic Components," IEEE Transactions on Speech and Audio Processing, Vol., 6, No. 1, pages 1-11, January 1998.
AO	Laroche, J., et al., "HNM: A Simple Efficient Harmonic + Noise Model for Speech," Proceedings of IEEE Workshop on Applications of Signal Processing to Audio and Acoustic, Mohonk, NY, October 1993.
AP	Tabrikian, J., et al., "Speech Enhancement by Harmonic Modeling Via Map Pitch Tracking," Proceeding ICASSP 2002, Vol. 1, pages 1549-1552.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.